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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/772,427	02/06/2004	Kouji Kubota	Q79788	2054
23373	7590	10/18/2006		
SUGHRUE MION, PLLC 2100 PENNSYLVANIA AVENUE, N.W. SUITE 800 WASHINGTON, DC 20037				
			EXAMINER CAMERON, ERMA C	
			ART UNIT 1762	PAPER NUMBER

DATE MAILED: 10/18/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/772,427

Applicant(s)

KUBOTA ET AL.

Examiner

Erma Cameron

Art Unit

1762

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 16 June 2006 and 03 August 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,4-7 and 12-16 is/are pending in the application.
- 4a) Of the above claim(s) 12 and 15 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 4-7, 13-14, 16 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Response to Amendment***

#### ***Election/Restrictions***

1. Applicant's election without traverse of Group I and species a) and d) in the reply filed on 12/12/2005 is acknowledged. Non-elected claims 8-11 have been canceled as have claims 2-3. Claim 12 is withdrawn as being drawn to a non-elected species.

New claim 15, directed to a (non-elected) fluorine-containing compound, is also withdrawn from examination.

Claims 1, 4-7, 13-14 and 16 have been examined.

#### ***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1, 4-7, 13-14 and 16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

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a) Claim 1: “and one or both of” is used twice, leading to confusion of the combinations being used.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1, 4-7 and 13-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fukazawa (5346949) in light of the admitted state of the prior art or Yamaguchi et al (6472019).

‘949 teaches applying a composition of fluoro-alkyl-acrylate, monomers that do not contain F (b), c) and d)), crosslinking monomers (5:1-6), a crosslinker (6:42-45), and a cationic water soluble polymer such as polyallylamine salt (2:20-57) to a fabric to make the fabric water and oil repellent (2:9-17). The cationic polymer provides an anchoring or fixative effect (5:43-59; 6:10-32). The cationic polymer may be added to the composition after the polymerization of the monomers (5:30-39), that is, mixed at the time of application. ‘949 teaches that the composition may be applied by various methods (6:46-49), but fails to teach the “exhaust” process (adjust pH, apply, steam, wash and dehydrate) of claim 1.

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The admitted state of the prior art is that the “exhaust” method of application (page 1, lines 10-18 of the instant application) is known.

It would have been obvious to one of ordinary skill in the art to have used a well-known, conventional process such as the exhaust process to apply the composition of ‘949 with the reasoned expectation of success.

‘019 teaches applying a fluorinated composition by the exhaust process to textile to make the textile water and oil repellent (1:45-60) – adjust the pH to at most 7, or 4 (12:58-65), apply the composition, steam, wash and dehydrate.

It would have been obvious to one of ordinary skill in the art to have used the ‘019 exhaust process to apply the ‘949 composition because of the reasoned expectation of success when using a well-known, conventional application method such as the exhaust process.

In light of the 12/12/2005 Declaration, in which 10 and 15 mol% of methacrylic acid (as compound (b)) was used to demonstrate that the presence of this level of methacrylic acid was detrimental to water and oil repellency, it is the examiner’s opinion that the applicant has not demonstrated that at the lower level of (b) compound, that is, 0.1 mol% , compound (b) is a material that “materially affects the basic and novel characteristics of the claimed composition”, even though compound (b) must be present. See the discussion of the Declaration below.

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The Declaration under 37 CFR 1.132 filed 12/12/2005 is insufficient to overcome the rejection of claims 1, 4-7 and 13-14 based upon 35 U.S.C. 103(a) as being unpatentable over Fukazawa (5346949) in light of the admitted state of the prior art or Yamaguchi et al (6472019). as set forth in the last Office action because:

the molar percentages used, namely 10 mol% and 15 mol%, do not cover the range of the Fukazawa (b) compound as used by Fukazawa, namely 0.1-15 mol%. In addition, the range of possible compounds corresponding to (b), "an alpha, beta-ethylenically unsaturated monomer containing carboxy group", has not been used in the experiments of the Declaration. The applicant has studied only methacrylic acid at 10 and 15 mol%. This is not the scope of (b) compound as used by Fukazawa.

### ***Response to Arguments***

The applicant has essentially repeated the same arguments in the 6/16/2006 amendment as in the 12/12/2005 amendment. In addition, the applicant argues that in practice, Fukazawa uses compounds with 8 carbons. Nonetheless, Fukazawa does claim 6 carbons (see claim 1). The applicant has argued that there is no need to test compound (b) at the lower level. However, in the 12/12/2005 Declaration, the compound was test at 10% and 15%. Fukazawa teaches to use compound (b) at preferably a range o 2.5 to 10 %, and further teaches that amounts of more than 15 % would lower the water resistance of the coating film (4: 3-19). Thus, applicant has test this compound at a level not recommended by Fukazawa.

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*Allowable Subject Matter*

6. Claim 16 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

7. The following is a statement of reasons for the indication of allowable subject matter:

The prior art does not disclose nor suggest the textile treating method of claim 1 wherein the fluorine-containing polymer has a repeating unit that is derived from a monomer having a perfluoroalkyl group with 1 to 4 carbon atoms.

*Conclusion*

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Erma Cameron whose telephone number is 571-272-1416. The examiner can normally be reached on 8:30-6:00, alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy Meeks can be reached on 571-272-1423. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
ERMA CAMERON  
PRIMARY EXAMINER

Erma Cameron  
Primary Examiner  
Art Unit 1762

October 16, 2006